DOCUMENT RESUME

ED 174 187 HE 011 714

AUTHOR Sanford, Timothy R.
TITLE The Effects of Student Aid on Recent College Graduates. ASHE Annual Meeting 1979 Paper.
PUB DATE Apr 79
NOTE 29p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (Washington, D.C., April 1979)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Access to Education; Career Choice; College Choice; *College Graduates; Educational Interest; Equal Education; Equal Opportunities (Jobs); Graduate Study; *Grants; Higher Education; Occupational Choice; Personal Values; Professional Education; *Student Financial Aid; *Student Loan Programs; *Work Study Programs
IDENTIFIERS *ASHE Annual Meeting 1979; National Longitudinal Study High School Class 1972; *Outcomes

ABSTRACT

This study is based on the assertion that it is not enough for student aid programs to facilitate attendance at, and even graduation from, a postsecondary institution because the very means used may have a negative impact on students who benefitted from such aid. While student aid may equalize college attendance across students, it may not promote equality of opportunity among college graduates. The National Longitudinal Study of the High School Class of 1972 data base was used. Four areas in the college graduates' lives are examined in terms of their relationship to student aid received during college: (1) attending graduate or professional school; (2) choosing a job; (3) forming a family; and (4) forming personal values. Three basic types of aid (loans, grants, and work) are the student aid variables, categorized by the amount of aid received. The major conclusion reached is that the hypothesized negative impact of aid, and particularly loans, on college graduates does not exist. It is much less clear, however, whether or not aid has any impact at all on college graduates. Short-term effects only were considered. It was also found that of the three types of aid, grants appear to be most promising in encouraging graduates to further their education, and that self-help aid (borrowing and working) is not detrimental to the graduates' behaviors as studied here. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED174187

THE EFFECTS OF STUDENT AID ON RECENT COLLEGE GRADUATES

Paper presented at the annual meeting
of the Association for the Study of
Higher Education, Washington, D.C.,
April 18-19, 1979

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Timothy R. Sanford

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

By

Timothy R. Sanford
Assistant Director
Office of Institutional Research
The University of North Carolina at Chapel Hill

HE 011 714

This paper is based on the author's dissertation which is available from University Microfilms. Computer support was provided under contract 300-78-0026 with the National Center for Education Statistics, James L. Morrison, Project Director.

Association for the Study of Higher Education
The George Washington University
One Dupont Circle, Suite 630
Washington, D.C. 20036
(202) 296-2597

This paper was presented at the Annual Meeting of the Association for the Study of Higher Education held at the Washington Hilton in Washington, D.C. April 18-19, 1979. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

THE EFFECTS OF STUDENT AID ON RECENT COLLEGE GRADUATES

Since Lady Mowlson established the first scholarship at Harvard in 1743 (Giddens, 1970:38), student financial aid has been a part of the college scene in America. Not until the establishment of the GI Bill in the aftermath of World War II, however, did student aid become available to large numbers of students at a wide variety of institutions across the country, and it was not until the passage of the National Defense Education Act in 1958 that a major federal program of student aid based on financial need came into existence (Carnegie Council, 1975). This legislation, which established the National Defense Student Loan Program, not titled National Direct Student Loan Program (NDSL), inaugurated the modern era of student aid (American College Testing Program, 1974:1).

Since NDSL began, additional federal student aid programs have been started; the major ones are the College Work-Study Program (CWSP) under the Economic Opportunity Act of 1964, the Supplemental Educational Opportunity Grant Program (SEOG), originally the Educational Opportunity Grant Program from the Higher Education Act of 1965, the Guaranteed Student Loan Program (GSLP) also from the 1965 legislation, and the Basic Educational Opportunity Grant Program (BEOG) under the Educational Amendments of 1972 (College Scholarship Service, 1975).

Unfortunately, increasing the number and type of student aid programs has not been accompanied by increasing understanding of the possible effects which the various types of aid programs may have on students. There seems to be an assumption, questioned by few, that it is the <u>providing</u> of financial assistance to students which is important and that the <u>manner</u> in which the assistance is provided

is unimportant (or certainly of much lesser importance). The purpose of this study is to see if the manner and the actual awarding of student financial aid make any difference to the students who receive such aid. As a number of previous studies (for example see Astin, 1975; Corrallo and Davis, 1977; Fenske and Boyd, 1971; Fife, 1975; Jackson, 1978; Knight, 1968; Leslie and Fife, 1974; Peng and Fetters, 1977; Riccobono and Dunteman, 1975; Shaw, 1972) have looked at the relationship between student aid and students before and during college, this study focuses upon the relationship after students graduate from college.

Framework

Equal educational opportunity is the major goal of the federal student aid programs, which can be characterized by three, specific objectives: access, choice, and retention (Fife, 1975:1). Within this framework, student aid programs are directed at reducing the financial barriers to attending college, to choosing expensive schools, and to staying in college. The rationale, briefly stated, is that money, or the lack of it, keeps people from going to college so student aid programs provide money.

Federal student aid programs seem to have achieved significant progress in expanding access and choice for thousands of college students who would not have continued their education beyond high school otherwise (Leslie, 1977:3). Although evidence on retention remains to be evaluated, there is a great deal of satisfaction associated with the field of student aid and the way in which the goal of equal educational opportunity has been achieved, or is being achieved. Yet, it may not be entirely appropriate to limit an evaluation of student aid to the measures of access, choice, and retention, at least not as they are currently being evaluated.

This study is based on the assertion that it is not enough for student aid programs to facilitate attendance at (and even graduation from) an institution of postsecondary education because the very means used may, in fact, have a negative

impact on students who benefited from such aid. While student aid may equalize college attendance across students, it may not promote equality of opportunity across college graduates. The rationale for this assertion rests on a hypothesized negative impact of student aid, primarily loans, on the life choices of college graduates who received such aid. Chambers (1962:21) suggests that loans are "cruelly discriminatory against women," termed "reverse dowries" by Ashworth (1972:47), and that loans force graduates to think first of "making a fast buck" so that their debts can be paid off quickly. The result may be that debt-ridden graduates turn away from less remunerative, perhaps more service-oriented, jobs in favor of those which promise the highest return.

Large debts resulting from college loans also may affect such commonplace occurrences among new college graduates as going to graduate school, getting married, or buying a home. Schultz (1969:56) points out that no one knows what may be "the effect of the requirement of college loan repayment on continued education, upon family formation, upon general credit status of graduates, or upon occupational choice and mobility." Similarly, J. Samuel Jones, Director of Financial Aid at the Massachusetts Institute of Technology, asks, "Does piling loans on undergraduates mean they will be inhibited from going to graduate school, where they will probably have to borrow more money?" (Winkler, 1976:3). In short, what college graduates do with their lives may be related to whether or not they received loans, or student aid generally, while they were in college.

The relationship between aid received during college and the actions of college graduates is based partially upon theory but primarily upon the author's experience in student aid. Anyone who has been on the receiving end of the joy of a student just informed of his/her scholarship award or who has shared the dismay of a student whom you have just told that the coffers are empty must feel that student aid makes a difference in the lives of students. Conceptually, one might suggest that any negative effect of loans operates through two different, though not

necessarily separate, mechanisms.

The first mechanism can be called a cultural inhibitor in that loans have different effects, or are perceived differently, by people from different cultures. What may appear to be entirely rational behavior to people from one culture may come across as ludicrous to people in another culture. For purposes of this study, cultural distinctions center around perceptions of and experiences with loans. Poor students who are more likely to need loans in order to attend college are less likely to have positive perceptions of the value of loans to borrowers. "Students with great financial need often come from cultures where borrowing is associated with exploitive merchants, so that loans may often be unacceptable to them" (Cartter, 1971:30). Loans may "discriminate against working-class students who are unlikely to have a time horizon long enough to foresee the advantages of a loan" (Sheehan, 1973:127). Regardless of the advantage of loans which are perceived or intended by society in general, it is the perceptions of the borrowers who ultimately affect the success or failure of loan programs, and who are the prime determiners of default rates. Because lower class students may not have had positive experiences with loans before borrowing to pay for educational expenses, loans may have a negative impact on the lives of such borrowers.

The second possible mechanism relates to motivation and its relationship to borrowers. As Astin (1975:14) points out:

> Do men who begin college dependent on loans quickly become disenchanted with the prospect of long-term indebtedness, once indebtedness from the first year becomes a reality? For some men, leaving college may be a more desirable alternative than incurring further indebtedness. Whatever the reasons, the psychological and motivational aspects of loans and indebtedness merit careful consideration in the development of future financial aid policy.

Motivational effects of loans are likely to apply to all classes of students who

come from all types of backgrounds, and, for lower class students, it is likely that an anti-motivational influence of loans may be a large part of the cultural mechanism suggested earlier. Nevertheless, at this time, the point is that loans are likely to influence a student's motivation towards learning through the sheer fact of borrowing and not because of differing cultural perceptions of loans. William M. Geer, Director of Student Aid at The University of North Carolina at Chapel Hill also reflects this feeling in postulating about why so many college students work part-time while attending college. "The main reason is that students would prefer to work than to borrow. The idea of borrowing large sums of money is frightening to young people whose families have always known poverty and debt" (Gardner, 1977:1).

To sum up this section two points should be emphasized. First, while the framework presented here is not strongly based in theory, it has some logic, particularly to anyone who has worked with students on student aid matters. One can hope that the research reported in this study will help to clarify the theoretical perspective surrounding student financial aid. Second, the organization of this research is somewhat at odds with the traditional notion of research which holds that the item of interest is variation in the dependent variable. The dependent variables used in this research are of interest, but the primary purpose of this research is to explore the possible effects of student financial aid on students and the dependent variables serve primarily as measures of these effects. It is the author's contention that student aid does affect the lives of students (in this case, college graduates), and this study is directed at testing that contention.

Review of Literature

The impact of the college experience on students who graduate from college has long been a topic of interest in the field of higher education. Two recent

works which are particularly comprehensive (Astin, 1977; Bowen, 1977) explore this issue in great detail and show that almost every aspect of the college experience has some meaning for the graduate who went through it. While this does not necessarily imply that student aid received during the undergraduate years also has an impact on the way college graduates live their lives, the far-reaching impact of college which has been demonstrated in areas other than student aid certainly suggests that student aid might have some influence as well. Five studies have been located which relate to this area of investigation.

Wight (1936) used graduates of the University of Chicago between 1893 and 1930 to see if having had scholarships made any difference in the graduates' pursuit of advanced education. While no controls (ability, college grades, etc.) were used, Wight found that 85.1 percent of the graduates who had received scholarships as undergraduates had undertaken additional study after graduation as compared to 79.1 percent of the graduates who had not received scholarships (p. 114).

In a massive study of 33,982 June, 1961 graduates of colleges and universities across the country, Davis (1964) found that "perceived financial obstacles" were a deterrent to pursuit of an advanced degree particularly for lower SES students (p. 118).

Ten years later, Baird (1973) surveyed 21,000 graduates in the class of 1971 at 94 colleges and universities. One of the many issues explored by his study was the extent to which indebtedness from undergraduate study influenced graduates to seek work instead of attending graduate/professional school. Baird surmised that "the amount students had borrowed as undergraduates and the amounts remaining to be paid were very similar for students who planned to continue their educations and those who did not" (pp. 71, 73).

Golladay and Noell (1978:136), reporting some recently released figures from the National Longitudinal Study, noted that in 1976, 13.8 percent of those

students who had received some form of financial assistance during their undergraduate years were attending, or had attended, graduate or professional school as compared to 8.6 percent of those who had not received any student aid. The relationship was not affected by independent controls for ability, educational aspirations, race, sex, or SES. While the significance of these figures cannot be overemphasized in the context of the study being reported here, they do not answer the whole question as neither type of aid received nor amount is considered.

The final study (Sanford, 1978a) reports the findings of a one year follow-up study of one-third of the May, 1976 bachelor's graduates of The University of North Carolina at Chapel Hill. Using analyses which closely parallel those which will be presented in this paper, the study found: 1. that attendance at graduate or professional school was not related to type or amount of aid received except that scholarship recipients were slightly more likely to continue their education (p. 1); 2. that graduates who had borrowed under the National Direct Student Loan Program (NDSL) were slightly less satisfied with their educational experiences (pp. 1-2); 3. that NDSL recipients, loan recipients in general, and aid recipients in general were slightly less satisfied with their jobs in terms of challenge, salary, and long-range plans (p. 2); and, 4. that aid recipients in general were slightly more likely to consider themselves underemployed (p. 2) (all findings significant at the 0.05 level).

Method

The National Longitudinal Study of the High School Class of 1972 (NLS) is the data base for this study. Sponsored by the National Center for Education Statistics of the Department of Health, Education, and Welfare, the project is conducted by the Research Triangle Institute (RTI). A base-year survey conducted in spring, 1972 and three follow-up surveys conducted in fall 1973, 1974, and 1976 comprise the information contained in the data base. Approximately 20,000 students repre-

senting more than 1,000 high schools participated in the project, and response rates to the various questionnaires have been 100 percent (combining mail responses and personal interviews) with sample retention rates throughout the project of better than 90 percent. A more complete description of the NLS Survey with a detailed description of the instruments, sample, methodology, and data collection procedures can be found in the NLS User's Manual (Levinsohn, Henderson, Riccobono, Moore, 1978). Only those NLS participants who had received a bachelor's degree by the time of the third follow-up (October, 1976) are included in this study (N = 3,136).

Four areas in the lives of college graduates are examined in terms of their relationship with student aid received during college: 1) attending graduate or professional school; 2) choosing a job; 3) forming a family; and, 4) forming personal values. While these four areas are not the only ones potentially of interest or importance, they were selected because they are among the more prominent ones suggested by relevant literature as being related possibly to student aid and because they are supported by longitudinal data readily available for analysis.

The student aid variables are operationalized two ways. First, the three basic types of aid--loans, grants, and work--are used as simple dichotomies: graduates either had them (Yes) or they did not (No). Second, the three types were categorized by the actual amount of aid received from $0 (None) to more than $5000 (six categories). Additionally, a composite variable combining the three types of aid into a single, Yes/No, aid dichotomy was created.

Analyses

Attending Graduate School

Several authors and studies (Baird, 1973; College Scholarship Service, 1962; Hanford and Nelson, 1970; National Board on Graduate Education, 1976; Schultz, 1969;

Southern Regional Office, 1968; Winkler, 1976) have raised the question that long-term indebtedness from educational loans taken out to finance undergraduate years may exert a negative influence on the borrowers' pursuit of additional education. If there is a relationship between having loans and attending graduate or professional school, it seems likely that graduates with loans who do not attend graduate school may do so because they do not wish to increase their debts or because they wish to reduce their debts before undertaking additional study which might require new loans. Stated succinctly, recent college graduates with loans are less likely to attend graduate or professional school than are graduates without loans.

As shown in Table 1, this hypothesis is not supported and, in fact, the opposite relation is true: graduates with loans are slightly more likely to be attending graduate or professional school than graduates who did not have loans as undergraduates.[1]

Because it seems reasonable that the amount of a graduate's debt may influence any decision concerning advanced study, Table 2 examines the relationship between amount of loan debt and attending graduate school. As can be seen in Table 2, the positive relationship between having loans and attending graduate school holds for every category of amount of loan in that more graduates with loans are attending graduate school than are graduates without loans.

In order to clarify the relationship between loans and attending graduate school and to reduce the chance that additional factors may be influencing the relationship, graduates' cumulative grade point average (GPA) and family social economic status (SES) were used as controls. GPA was used because graduates with high GPA's may have been more likely to get scholarships, and not loans, and may

[1] Achieving statistical significance is greatly enhanced by the large size of the sample. While this need not make one apologetic for using a large sample or for achieving statistical significance, it does call for a certain amount of restraint in interpretation of the findings. Most of the findings in this study are significant for what they do not support rather than for the small relationships reported.

Table 1

Percentage Distribution of Attendance at Graduate or Professional School by Having Had Loans

Attendance at Graduate School	Had Loans		
	No	Yes	Total
No	77.9	73.4	76.2
Yes	22.1	26.6	23.8
	(n=1665)	(n=1025)	

Note

Chi Square = 6.93 $p < .01$
Gamma = 0.12
Eta = 0.05
Pearson's R= 0.05 $p < .01$

* *

Table 2

Attendance at Graduate or Professional School by Amount of Loans

Amount of Loan	Attendance at Graduate School	
	No	Yes
None	1297 (77.9)[a]	368 (22.1)
$500	75 (72.1)	29 (27.9)
$500-999	94 (74.6)	32 (25.4)
$1000-1999	201 (74.7)	68 (25.3)
$2000-4999	297 (73.0)	110 (27.0)
$4999	85 (71.4)	34 (28.6)
Total	2049 (76.2)	641 (23.8)

Note

Chi Square = 7.93
Gamma = 0.10
Eta = 0.05
Pearson's R = 0.05 $p < .01$

[a]Figures in parentheses denote percentages by amount of loan.

have been more likely to pursue graduate study. SES was used because lower SES graduates were more likely to have needed and gotten loans as undergraduates and may have been somewhat less likely to attend graduate school.

Multiple crosstabs using the three categories of SES as controls showed that the positive relationship between loans and graduate school was statistically significant only for the middle SES group of graduates. This was true when both having had loans and amount of loans were used against attendance at graduate school. When partial correlations were used, the first-order partial controlling for SES produced $r = 0.07$, $p < .001$, for the relationship between amount of loan and attendance at graduate or professional school. Despite the expected difference in the relationship between loans and attendance for different SES graduates as mentioned earlier, there is not marked difference among the three SES categories. Higher percentages of graduates indicate attendance going from the low to high SES categories, but this holds for both those graduates who had loans and those who did not have loans. The preliminary indication, then, is that loans do not appear to have a differential impact on low SES students as theorized.

When the five categories of GPA were used as controls in multiple crosstabs the findings showed a negative relationship between loans and attendance ($r = -0.21$, $p. < .05$) for the lowest category of GPA (1.75-2.24), a positive relationship ($r = 0.08$, $p < .01$) for the 3.25-3.74 category, and insignificant relationships for the other three categories of GPA. Partial correlation analysis showed a first order partial of 0.06, $p < .01$, when controlling for GPA. A second order partial, controlling for both SES and GPA, showed the positive relationship between loans and attendance still in evidence ($r = 0.07$, $p < .001$).

In considering the relationship between attending graduate school and the other two types of aid, grants and work, findings similar to those for loans were found when grants were used but no relationship with work was evident. Similar results appeared when amounts of grants and work were used.

When the three types of student aid are collapsed into a single "Aid/No Aid" variable, one finds a positive relationship with attendance as shown in Table 3. This relationship is found for the middle ($r = 0.07$, $p < .05$) and upper ($r = 0.08$, $p < .01$) SES categories; the low SES category only has 10 graduates who had not received any aid. When GPA is controlled in multiple crosstabs, the only significant relationship is negative for the lowest category ($r = -0.25$, $p < .05$). Partial correlations show a positive relationship controlling for SES ($r = 0.07$, $p < .001$), GPA ($r = 0.03$, $p < .05$), and the two together ($r = 0.05$, $p < .01$).

The results from a multiple regression analysis on attending graduate school are shown in Table 4. Amount of loans is the first student aid variable to enter the analysis, but none of the student aid variables can be considered particularly important in helping to explain differences in attending graduate or professional school.

Before continuing with the study, an additional procedure for testing the relationship between student aid and dependent variables should be introduced. Student aid is customarily awarded to students in packages; that is, students usually receive several types of aid at one time or during their undergraduate years rather than one single type. Hence, one is justly concerned about the interactions between and among the different types of aid received by the graduates in this study. Do combinations of loan and grant, loan and work, grant and work, or loan, grant, and work have any different relationship with the dependent variable which in this case is attending graduate school?

Multiple crosstabs and partial correlation analysis using the types of aid as controls on one another reveal that the only change in the results presented above is that the positive relationship between loans and attendance is no longer significant when grants are considered. Results of the partial correlations are shown in Table 5. Grants continue to be positively related, at a statistically significant level, regardless of whether or not graduates had loans, work, or

Table 3

Percentage Distribution of Attendance at Graduate or Professional School by Having Had Student Aid

Attendace at Graduate School	Had Aid[a]		
	No	Yes	Total
No	80.1	74.6	76.2
Yes	19.9	25.4	23.8
	(n=765)	(n=1925)	

Note

Chi Square = 8.93 $p < .01$
Gamma = 0.16
Eta = 0.06
Pearson's R = 0.06 $p < .01$

[a]Had Aid is composed of loans, grants, and work in that a graduate who had any amount of any type of aid is coded "Yes"; only those graduates who had no aid of any type are coded "No."

* *

Table 4

Regression Analysis of Attending Graduate or Professional School with Variables Entered in Order of Significance

Variable	Multiple R	R^2	Simple r	Beta
Educational Plans, 1973	0.366	0.134	0.366	0.295
GPA	0.398	0.158	0.245	0.159
Sex (Women)	0.405	0.164	-0.105	-0.072
Aptitude	0.408	0.167	0.162	0.054
Amount of Loans	0.411	0.169	0.044	0.037
Amount of Grants	0.413	0.170	0.086	0.035
SES	0.414	0.171	0.069	0.041
Amount of Work	0.414	0.172	0.000	-0.030
AID (Yes)	0.415	0.172	0.061	0.030
Race (White)	0.415	0.172	0.020	-0.016

Table 5

Partial Correlation Analysis of the Relationship between Attending Graduate or Professional School and Student Aid Packages

Zero-order Correlations			
	Attending Grad School	Amount of Loans	Amount of Grants
Attending Grad School	1.000	-	-
Amount of Loans	0.050	1.000	-
Amount of Grants	0.089	0.380	1.000
Amount of Work	0.018*	0.193	0.213

First-order Partial Correlations		
	Controlling for Grants	
	Amount of Loans	Amount of Work
Attending Grad School	0.018*	-0.001*
	Controlling for Work	
	Amount of Loans	Amount of Grants
Attending Grad School	0.047	0.087
	Controlling for Loans	
	Amount of Grants	Amount of Work
Attending Grad School	0.075	0.009*

Second-order Partial Correlations**			
	Amount of Loans	Amount of Grants	Amount of Work
Attending Grad School	0.018*	0.075	-0.003*

Note. *Correlations with asterisks not significant at .05 level.
**Correlations shown with other two types of aid controlled.

both; and work continues to show no significant relationship.

The final test for interactions was the introduction of interaction terms in regression analysis on attendance; the results are displayed in Table 6. Clearly there are some differences between this analysis and the one presented in Table 4, but the small change in amount of variance explained, 17.4 percent instead of 17.2 percent, leads one to feel that the interaction terms do not add significantly to the model. In addition, one needs to be wary of the inclusion of these interaction terms because of their high correlation with the student aid variables. Multicollinearity does not appear to be affecting the model as none of the regression statistics are unexpectedly out of line, but the possibility makes interpretation of Table 6 somewhat less certain.

An important part of the decision to attend graduate school is the educational plans of the college graduate. Based upon the framework of a negative influence of loans, as has been developed throughout this paper, one might suggest that graduates with loans would have lower expectations than graduates without loans.

Table 7 presents the relationships between aid received and educational plans as measured in 1976 on the NLS third follow-up questionnaire. For all three types of aid and the combined aid variable there is a positive relationship between having received aid and educational plans. The same findings occurred when amount of aid was used.

Regression analyses of eduational plans, 1976 also were run using the various types of aid received by the graduates. As can be seen from Table 8, the student aid variables do not explain much of the variance in the educational plans of college graduates (2.1 percent; 2.4 percent with aid interactions).

In order to see what the aid variables might add to a more traditional regression of educational plans, other variables were added: educational plans, 1973, attending graduate school, sex, race, GPA, SES, and aptitude. Table 9 shows the results, and amount of loans appears to be the only aid variable that

Table 6

Regression Analysis of Attending Graduate or Professional School with Aid Interaction Terms

Variable	Multiple R	R^2	Simple r	Beta
Educational Plans, 1973	0.366	0.134	0.366	0.296
GPA	0.398	0.158	0.245	0.159
Sex (Women)	0.405	0.164	-0.105	-0.070
Aptitude	0.408	0.167	0.162	0.055
Amount of Loans	0.411	0.169	0.044	0.109
Amount of Grants	0.413	0.170	0.086	0.109
Grants x Work	0.414	0.171	0.030	-0.107
SES	0.415	0.173	0.069	0.040
Race (White)	0.416	0.173	0.020	-0.016
Loans x Work	0.416	0.173	0.008	-0.099
Amount of Work	0.416	0.173	0.000	0.058
Loans x Grants x Work	0.416	0.173	0.038	0.110
Loans x Grants	0.417	0.174	0.066	-0.077
Had Aid (Yes)	0.417	0.174	0.061	-0.021

Table 7

Percentage Distribution of 1976 Educational Plans by Having Had Student Aid

Educational Plans, 1976	Had Student Aid		
	No	Yes	Total
	Loans		
Bachelors	25.6	15.2	21.6
Masters	54.0	60.2	56.4
Doctorate	20.3	24.6	22.0
	(n=1760)	(n=1090)	
	Grants		
Bachelors	26.3	18.2	22.2
Masters	55.3	57.4	56.4
Doctorate	18.4	24.4	21.4
	(n=1481)	(n=1524)	
	Work		
Bachelors	23.9	19.8	22.2
Masters	57.0	55.5	56.4
Doctorate	19.1	24.6	21.4
	(n=1755)	(n=1250)	
	Aid		
Bachelors	27.7	19.3	21.6
Masters	55.6	56.7	56.4
Doctorate	16.7	24.0	22.0
	(n=798)	(n=2052)	

Note	Loans	Grants	Work	Aid
Chi Square	= 43.73 p<.001	37.77 p<.001	15.92 p<.01	33.52 p<.001
Gamma	= 0.19	0.19	0.13	0.21
Eta	= 0.11	0.11	0.07	0.11
Pearson's R	= 0.11 p<.001	0.11 p<.001	0.07 p<.001	0.11 p<.001

Table 8

Regression Analysis of Educational Plans, 1976

Variables*	Multiple R	R^2	Simple r	Beta
Amount of Grants	0.118	0.014	0.118	0.085
Amount of Loans	0.140	0.020	0.113	0.078
Amount of Work	0.144	0.021	0.005	-0.044
Had Aid (Yes)	0.146	0.021	0.088	0.029
With Aid Interaction Terms				
Loans x Grants	0.128	0.016	0.128	0.017
Had Aid (Yes)	0.137	0.019	0.088	0.051
Amount of Work	0.146	0.021	0.005	-0.055
Grants x Work	0.152	0.023	0.069	0.036
Amount of Loans	0.153	0.023	0.113	0.089
Loans x Work	0.155	0.024	0.050	-0.094
Loans x Grants x Work	0.156	0.024	0.085	0.081
Amount of Grants	0.156	0.024	0.118	0.031

Note. *For both regressions, variables entered in order of significance.

* *

Table 9

Regression Analysis of Educational Plans, 1976

Variables*	Multiple R	R^2	Simple r	Beta
Educational Plans, 1973	0.482	0.232	0.482	0.362
Attending Grad School	0.541	0.292	0.410	0.250
Amount of Loans	0.550	0.303	0.113	0.085
GPA	0.553	0.306	0.209	0.061
Race (White)	0.556	0.309	-0.073	-0.066
Aptitude	0.557	0.310	0.123	0.028
Amount of Grants	0.557	0.310	0.118	0.012
Amount of Work	0.557	0.310	0.005	-0.019
Had Aid (Yes)	0.557	0.311	0.088	0.020

Note. *Variables entered in order of significance. SES and sex were below the minimum tolerance level of inclusion.

makes any substantial contribution. Regression with the aid interaction teams was run but the results were nearly identical (31.2 percent of variance explained).

Choosing a Job

The primary influence which loans are suspected of having on job choice is that borrowers are more likely to choose more remunerative, less service-oriented jobs than non-borrowers (Chambers, 1962; College Scholarship Service, 1962; Hanford and Nelson, 1970; Schultz, 1969; Southern Regional Office, 1968; "Student Loan Explosion," 1978). This influence may operate simply through the added repayment burden on the borrower's take-home pay which the non-borrower does not have to face. Graduates repaying educational loans must either settle for a slightly lower standard of living than other graduates in similar jobs who are not repaying loans or they must get jobs with somewhat higher salaries to compensate for the loan repayment. Because it is not possible to examine the job selection process exactly and because service-oriented jobs are normally lower paying positions for college graduates, the emphasis is on salaries which working graduates report they are earning.

Analysis of the relationship between loans and salaries for those graduates working full-time yielded a zero order correlation of -0.02 which is not significant at the 0.05 level. Partial correlations controlling for SES, GPA, and both together showed no changed. When grants, work, and aid were used as independent variables, similar insignificant results were found. Regression analyses using salaries as the dependent variable run with and without the aid interaction terms showed no particular influence of the aid received.

Another area relating to job choice which is examined is the relationship between loans and having second jobs for those graduates who are working full-time. Because of the tight job market for the 1976 graduates, it may have been difficult for them to find jobs with sufficient salary for them to feel comfortable with

their loan repayments; hence, they may have sought second jobs to augment their income. While the data provide some support for this relationship, the findings are not unequivocal: a significant positive relationship results when loans are used; a significant positive correlation results with grants and work when used as dichotomies but not when amount is used; aid in general is not significantly related to having a second job. Thus, the relationship between loans and having second jobs is supported, at least in part, but the meaning of the finding is made less clear by the findings of additional relationships with other types of aid.

Forming a Family

The most prevalent suggested effect of loans on students which is found in the literature is the "negative dowry" effect (Ashworth, 1972; Chambers, 1962; Hanford and Nelson, 1970; Maynard, 1975; Peacock and Wiseman, 1964; Schultz, 1969; Sheehan, 1973); that is, women with loans are potential marriage partners who take something away from the material possessions of the family instead of bringing something (the dowry) to it. While the dowry is no longer a part of the marriage contract, that concept makes some sense in that graduates with loans may be somewhat hesitant to marry or begin a family until their financial situation seems more stable. Despite the dowry connotation, this relationship between loans and family formation is likely to have equal legitimacy for graduates of both sexes. This relationship, however, is not supported by the data and further examination of possible relationships between loans (and the other types and amounts of aid) and having children also produced insignificant results.

Forming Personal Values

Because of the complexity of values and research in this area, this study

does not propose to examine the relationship between student aid and values in depth. Materialism has been suggested as one aspect of a person's values which may be affected by receiving student aid (Chambers, 1962; College Scholarship Service, 1962), and this study uses materialism as a dependent variable operationalized as the importance of job security, earning a good income, and having lots of money to the graduates in the NLS data.

Examination of the relationships between all three areas and aid received by graduates turned up generally inconclusive results regardless of type or amount of aid received. One significant exception, which was contrary to the expected results, was the graduates who had received grants or work tended to place less importance on having lots of money ($r = -0.12$, $p < .001$).

Conclusions

Contrary to the hypothesized relationship, loans and grants are positively related to attending graduate or professional school. (Note: all relationships mentioned in this section are significant at the 0.05 level, at least, unless otherwise noted.) These relationships hold with controls for SES and GPA. Interaction effects among the aid variables ("package" effects) cause the relationship between loans and attending to become insignificant when controlling for grants. The positive relationship with grants is not affected by controlling for loans (partial correlation analysis); however, in running multiple crosstabs the relationship between grants and attending is not significant for those graduates who also had loans. Work is not significantly related to attending graduate school and does not have much affect in combination with other types of aid.

All types of aid are positively related to educational plans as measured after the senior year; these findings hold even when initial plans are controlled. A regression analysis of educational plans, measured after graduation from college, shows loans to be the second most important predictor, of those variables entered

in the model. Having loans as an undergraduate appears to be positively related to educational plans as measured after graduation.

For graduates who entered the labor force, there is no relationship between their salaries and the aid they received as undergraduates. Regardless of type of aid received, graduates who had received aid and were working full-time are more likely to have second jobs than graduates who had not received aid.

Marital status is not related significantly to type or amount of student aid received as an undergraduate. For married graduates the number of children expected also is not significantly related to student aid. When children were planned for married graduates does show some relationship, generally with aid recipients slightly more likely to be planning children in the near future.

One area of personal values to which student aid was hypothesized to be related was materialism operationalized as importance of having lots of money, of job security, and of earning a good income. The only significant relationships which hold up when controls for the graduates' 1972 ratings of the variables are used are that grant and work recipients place less importance on having lots of money in life.

The major conclusion reached by this study is that the hypothesized negative impact of aid, particularly loans, on the lives of college graduates does not exist. Despite the certainty of this conclusion, much less certainty exists when one attempts to ascertain if student aid has any impact at all on college graduates. The results presented here apply only to <u>recent</u> college graduates, and the study, as such, has examined only the short-term effects which aid might have on graduates. Whether or not one believes that any long-term effects (measured ten years after graduation for instance) will be any different, they have not been studied.

Remembering that the conclusions of the study relate to the short-term effects of student aid on college graduates, the findings suggest two broad,

related implications.

First, of the three types of aid considered, grants appear to be the most promising in terms of encouraging graduates to further their education. Of the various combinations of aid which could be awarded as packages, grants and work seem to have the most positive relationship with attendance at graduate or professional school. While loans are not negatively related to the student behaviors examined here, loans do seem to cancel out some of the otherwise positive influence exerted by grants. These findings tend to support previous studies (Astin, 1975; 1977; Astin and Panos, 1969; Knight, 1968) which suggested a positive relationship between grants and undergraduate student behaviors. The negative relationships between loans and achievement (Astin, 1977; Knight, 1968) and between loans and persistence (Astin, 1975), reported elsewhere, do not seem to have any direct bearing on the behavior of college graduates.

Second, this study appears to document clearly that the "self-help" forms of student aid (borrowing and working) are not detrimental to the behaviors of college graduates as studied here. This is important both because the current federal aid programs place a lot of emphasis on loans and work and because one might feel, intuitively at least, that loans and work might have a negative impact given the need to repay loans from future earnings and the need to spend hours working during college that might have been spent studying. Despite the initial impetus for doing this study, the findings show no support for the belief that large loans (or work) hinder the decisions and choices made by college graduates. With this in mind, the findings do not suggest any reason for the default problem with educational loans. If borrowers were found to behave in much different fashion from non-borrowers and their behavior was seen as somewhat less desirable than that engaged in by non-borrowers, then we might see a possible reason for a high default rate.

REFERENCES

American College Testing Program. Handbook for financial aid administrators. 1974.

Ashworth, K.H. Scholars and statesmen. San Francisco: Jossey-Bass, 1972.

Astin, A.W. Financial aid and student persistence. Los Angeles: Higher Education Research Institute, July, 1975. (ERIC Document Reproduction Service No. ED 112 804)

Astin, A.W. Four critical years. San Francisco: Jossey-Bass, 1977.

Astin, A.W. & Panos, R.J. The educational and vocational development of college students. Washington, D.C.: American Council on Education, 1969.

Baird, L.L. The graduates. Princeton: Educational Testing Service, 1973.

Bowen, H.R. Investment in learning. San Francisco: Jossey-Bass, 1977.

Carnegie Council on Policy Study in Higher Education. The federal role in postsecondary education. San Francisco: Jossey-Bass, 1975.

Cartter, A.M. New approaches to student financial aid. New York: College Entrance Examination Board, 1977.

Chambers, M.M. Chance and choice in higher education. Danville, Ill.: Interstate Printers, 1962.

College Scholarship Service. Perspectives on financial aid. New York: College Entrance Examination Board, 1975.

College Scholarship Service. Student financial aid and national purpose. New York: College Entrance Examination Board, 1962.

Corrallo, S.B. & Davis, J.A. Impact of financial aid on postsecondary entrance and persistence. Symposium: Trends in postsecondary education. Presented at the Annual Meeting of the American Educational Research Association, April, 1977.

Davis, J.A. Great aspirations. Chicago: Aldine, 1964.

Fenski, R.H. & Boyd, J.D. The impact of state financial aid to students on choice of public or private college. College and University, 1971, Winter, 98-107.

Fife, J.D. Applying the goals of student financial aid. (ERIC/Higher Education Research Report No. 10) Washington, D.C.: American Association for Higher Education, 1975.

Gardner, R. More students work to finance education. Daily Tar Heel, March 15, 1977, p. 1. (Student Newspaper of The University of North Carolina at Chapel Hill.)

Giddens, T.R. The origins of state scholarship programs: 1647-1913. College and University, 1970, 46(1), 37-45.

Golladay, M.A. & Noell, J. The condition of education 1978 edition. (Statistical Report of the National Center for Education Statistics) Washington, D.C.: U.S. Government Printing Office, 1978.

Hanford, G.H. & Nelson, J.E. Federal student loans plans: The dangers are real. College Board Review, Spring, 1970, pp. 16-21.

Jackson, G.A. Financial aid and student enrollment. Journal of Higher Education, 1978, 49(6), 548-574.

Knight, H.V. A multivariate analysis of the academic achievement among freshmen financial aid recipients enrolled at selected Louisiana colleges: 1964-1966. (Doctoral dissertation, University of Southern Mississippi, 1968). Dissertation Abstracts, 1968, 29, 2928A-2929A. (University Microfilms. No. 69-4699).

Leslie, L.L. Higher education opportunity: A decade of progress. ERIC/Higher Education Research Report No. 3) Washington, D.C.: American Association for Higher Education, 1977.

Leslie, L.L. & Fife, J.D. The college student grant study. Journal of Higher Education, 1974, 45(9), 651-671.

Levinsohn, J., Henderson, L.B., Riccobono, J.A., & Moore, R.P. Data file users manual. Research Triangle Park, N.C.: Research Triangle Institute, 1978.

Maynard, A. Experiment with choice in education. (Hobart Paper 64 of The Institute of Economic Affairs) Staffordshire, Great Britain: Gibbons Barford, 1975.

National Board on Graduate Education. Minority group participation in graduate education. Washington, D.C.: National Academy of Sciences, 1976.

Peacock, A.T. & Wiseman, J. Education for democrats. (Institute of Economic Affairs Hobart Paper 25.) London: McCorquodale, 1964.

Peng, S.S. & Fetters, W.B. College student withdrawal: A motivational problem. Symposium: Trends in postsecondary education. Presented at the Annual Meeting of the American Educational Research Association, April, 1977.

Riccobono, J.A. & Dunteman, G.H. National longitudinal study of the high school class of 1972: Preliminary analyses of student financial aid. Research Triangle Park, N.C.: Research Triangle Institute, 1975.

Sanford, T.R. The effects of aid on college graduates. Paper presented at the N.C. Association for Institutional Research Conference, Institutional Research and Student Aid, August 11, 1978. (a)

Sanford, T.R. Student aid research: Policy and planning implications. Paper presented at the annual conference of the Southern Association for Institutional Research, October 26, 1978. (b)

Schultz, K. A study of student financial aid in Virginia. Richmond: Virginia State Council of Higher Education, 1969. (ERIC Document Reproduction Service No. ED 035 375).

Shaw, T.W. A study of the effectiveness of financial aid in terms of academic achievement at California State College at Long Beach. Long Beach, Cal.: California State University at Long Beach, 1972. (No. M-3612)

Sheehan, J. The economics of education. London: George Allen and Unwin, 1973.

Southern Regional Office of the College Entrance Examination Board. A study of student financial aid in North Carolina, 1968. Raleigh, N.C.: North Carolina Board of Higher Education, 1968.

Student loan explosion creates 20th century "indenture" system. Chapel Hill Newspaper, February 12, 1978, pp. 1c, 5c.

Wight, E.A. Financial assistance to students in the University of Chicago. Chicago: University of Chicago Libraries, 1936.

Winkler, K.J. The long arm of Washington's Basic Opportunity Grants. Chronicle of Higher Education, October 25, 1976, p. 3.